were connected to a stilt as high as 6 inches (15 centimeters).

Most shoes are made of leather. But shoe companies also use many other materials, including canvas, velvet, and such synthetic substances as plastics. Shoe materials and styles vary somewhat from one country or region to another, depending on climate, custom, or other differences. For example, farmers and fishermen in The Netherlands often wear heavy wooden shoes that protect their feet from the damp ground. Many Japanese wear shoes outside their home but prefer soft slippers at home. People in some regions often wear foot coverings other than shoes. They may wear sandals during the hot summer and switch to warm boots for the cold winter.

**Kinds of Shoes.** There are four main kinds of shoes, depending on their use: (1) casual and dress shoes, (2) sport shoes, (3) work shoes, and (4) corrective shoes.

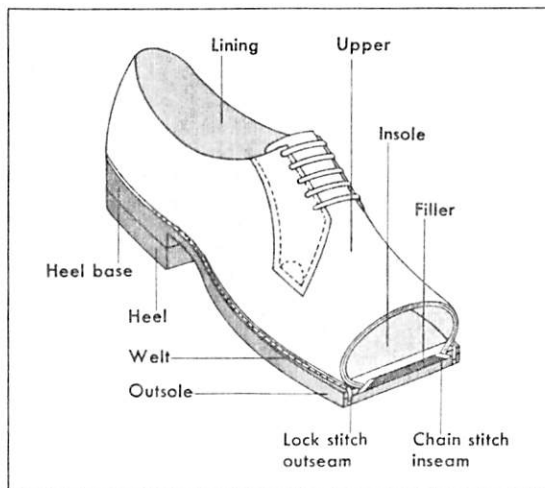
*Casual Shoes and Dress Shoes* are made for almost all everyday occasions. Most casual shoes are based on such low-heeled styles as the loafer, moccasin, oxford, and pump. Oxfords feature a lacing up the top and over a tongue. Loafers, moccasins, and pumps are *slip-on* shoes that have no lace or tongue.

Most dress shoes, or *evening shoes*, for women are based on the pump or sandal style and have high or medium heels. Materials used for these shoes include brocade, satin, silk, tapestry, and velvet. Most men's dress shoes are pumps and are made of leather or *patent leather* (leather with a glossy finish).

*Sport Shoes* have different features for various sports. For example, basketball shoes and tennis shoes have rubber soles that keep the player from slipping. These soles also prevent the shoes from damaging the playing surface. Baseball shoes have metal or synthetic-rubber spikes that enable the wearer to start and stop quickly. Football shoes have synthetic-rubber cleats for the same purpose.

*Work Shoes* are worn for safety and comfort in many kinds of jobs. Most types of work shoes are sturdy and long wearing and are made of leather. Workers in some factories wear shoes equipped with a steel section inside the toe for protection against injury. People in many trades require shoes especially designed to prevent slipping. Most mail carriers, nurses, waitresses, and others who must stand or walk for long periods wear shoes that have a cushioned sole.

*Corrective Shoes* are designed to provide relief from such foot conditions as bunions and corns (see BUNION; CORN). They also are used for *hammertoes* (toes bent in the form of a claw) and other disorders. Some corrective shoes are ready-made products that have built-in corrections for the most common foot problems. For example, one style features a special heel that supports the *arch*, the curved part of the sole of the foot. Other corrective shoes are specially made for one person, some according to a physician's prescription. A person can also have special shoes made to fit the exact shape of the feet—including any corns or other bulges. Such shoes allow space for the swellings and so reduce the pressure against these areas.

Shoes called *negative heel shoes* are intended to prevent, rather than correct, problems that may be caused by shoes. The heels of negative heel shoes, unlike those of most shoes, are lower than the toes. Designers of negative heel shoes declare that the low heels help a person stand and walk more upright than is possible with regular shoes. But they warn that negative heel shoes may be harmful for persons who have flatfeet or problems with an Achilles' tendon (see ACHILLES' TENDON; FLATFOOT).

WORLD BOOK diagram

**The Parts of a Shoe** are put together by various machines operated by workers at a shoe factory. The sections of the upper part of the shoe are sewed together and then fastened to the sole.

**The Shoe Industry of the United States** produces about 490 million pairs of shoes annually, of which about $3\frac{1}{2}$ million pairs are exported. Americans buy about 300 million pairs of shoes yearly that have been imported from Italy, Japan, Spain, and other countries. The manufacture of a pair of shoes requires dozens of operations and many workers. In general, shoes made outside the United States cost less than American-made shoes because of lower labor costs in many other countries.

Most shoe designers work for manufacturers of footwear. A shoe designer makes sketches of various ideas and decides what colors and materials will be used. The manufacturer produces samples of the shoes, and sales representatives show the samples to buyers from shoe stores and department stores. The buyers then order the shoes from the manufacturer.

At a shoe factory, workers make a pattern of each shoe style. Using the pattern, other workers cut sections that will form the *upper* (upper part) of the shoe. The sections of the upper are then stitched together on a machine. Another type of machine prepares the sole. A *shoe-lasting* machine molds the upper on a *last*, a wooden block shaped like a foot. On the last, the upper is fastened to the sole by gluing, stitching, or some other method. Finally, the heel and such decorations as a bow or buttons are added.

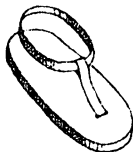
**Shoes and Health.** Shoes that have been poorly fitted can cause such problems as backaches, sore muscles, fatigue, and poor posture. Shoes that are too tight may result in bunions, corns, hammertoes, and ingrown toenails. Such problems can be avoided by taking special care when buying shoes, especially children's shoes. Most children outgrow shoes within a few months.

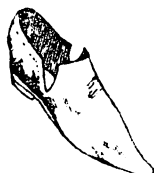
## Some Shoes of the Past

**Throughout history, fashion has often determined the style of men's and women's shoes. The desire of people to be fashionable has led to many unusual kinds of shoes.**

WORLD BOOK illustrations by David Cunningham

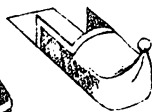
Egyptian sandal (2000 B.C.)

Roman sandal (A.D. 100's)

Japanese clog (600's)

German carbatine (900's)

French shoe (1400's)

English shoe (1500's)

Chinese slipper (1600's)

Dutch shoe (1600's)

East Indian babouche (1700's)

**History.** No one knows when man first began to wear shoes. The first foot coverings worn in cold regions were probably baglike wrappings made of animal fur. The first known footwear used in warm surroundings consisted of sandals made of plant fibers or leather. The ancient Egyptians wore such sandals as early as 3700 B.C., and the ancient Greeks and Romans also wore sandals. Those three peoples also wore soft leather shoes occasionally. In China, people wore wooden-soled shoes and cloth shoes thousands of years ago.

Throughout history, shoes have been worn not only for protection but also for decoration and to indicate social status. Various shoe styles have gone in and out of fashion, just as they do today. For example, people in Western Europe wore shoes with long, pointed toes for several centuries until the A.D. 1500's. The fashion in women's shoes changed to rounded toes during the 1500's, low heels by the late 1500's, and high heels in the 1600's.

The Indians of North America made moccasins of animal skins before European settlers first arrived. The Europeans who settled in the New World wore sturdy leather shoes most of the time, but some colonists also wore moccasins.

Until the mid-1800's, despite the many changes in shoe styles, shoemaking itself involved chiefly the use of simple hand tools. Most people wore homemade shoes or bought shoes from a shoemaker who lived nearby or traveled from house to house. Improved sewing machines were developed in the mid-1800's, and shoemaking became a factory operation. These machines had special devices to stitch shoe parts that previously had required nailing or stitching by hand.

In 1882, Jan Ernst Matzeliger, a worker in a Massachusetts shoe factory, invented the shoe-lasting machine. This and other new shoemaking machines led to the mass production of shoes by 1900. The mass production of footwear brought a great reduction in the price of these products. MARION LILLARD

See also LEATHER; MATZELIGER, JAN ERNST; MOCCASIN; WOODEN SHOE.

...ther, and so both feet should be fitted. A person ... walk around in the store while trying on new shoes to ensure a comfortable fit.

Some people wear certain fashionable shoes even though these shoes are uncomfortable and can hurt the feet. For example, heels higher than 2 inches (5 centimeters) cramp the toes by pushing the feet forward. Pointed shoes also crowd the toes. Shoes with hard, high soles can prevent flexible movement of the feet. Hot feet can result from shoes that do not *breathe* (allow foot moisture to escape). Most shoes made of a synthetic material do not breathe so well as leather ones.



...vering for the foot. Shoes have ... also have a heel. The upper part ... no higher than the ankle. Boots ...ch beyond the ankle. People wear ...eir feet from cold weather, sharp ...fortable surfaces.

...ı important part of people's clothing. As a ... ɲn often determines the style of shoes that individu... wear. The desire of men and women to be fashionable has led to many unusual shoe styles. For example, many European men of the 1300's wore shoes called *crackowes*, which had an extremely long toe. Some crackowes had a toe so long that it had to be fastened to the knee with a chain to prevent the wearer from tripping. Some European women of the 1600's wore shoes with soles so thick that walking was impossible without support. Shoes once worn in the Orient